

Claims

I claim:

1. A system for holding a camera steady during its movement while recording, said system comprising

- a) a support platform to which the camera is secured;
- b) a support shaft connected to a bottom surface of said platform;
- c) a sphere affixed to an upper portion of said support shaft;
- d) a socket plate member which pivotally captures said sphere in a socket formed therein;
- e) a balance plate connected to a bottom portion of said support shaft to help counterbalance a weight of the camera;
- f) means attachable to said socket plate member by which said support platform and its cargo is suspended;

whereby when the platform support with its cargo is transported during video recording using the means attachable to said socket plate member, the camera is maintained in a steady position.

- 2. The system of Claim 1 wherein said socket plate member permits said sphere to pivot $\pm 60^\circ$ about a roll axis, $\pm 60^\circ$ about a pitch axis, $\pm 360^\circ$ about a yaw axis.
- 3. The camera platform support of Claim 1 wherein said support shaft is formed in a first upper portion and a second lower portion, and said first upper portion may be locked in

any desired position within an angle of $\pm 60^\circ$ relative to said second lower portion by means of a joint with a locking mechanism.

4. The system of Claim 1 wherein said socket plate member comprises a first upper plate with a first downwardly directed truncated spherical recess and a second lower plate with a second upwardly directed truncated spherical recess, said first and second truncated spherical recesses capturing said spherical ball and serving as said spherical ball's bearing surface.

5. The system of Claim 4 wherein said spherical ball is made of TEFLON material.

6. The system of Claim 1 wherein said means attachable to said socket plate comprises a handle.

7. The system of Claim 6 wherein said handle has a first straight portion and a second angled portion.

8. The system of Claim 7 wherein said second angled portion forms an angle of 15° with said first straight portion.

9. The system of Claim 6 wherein said means attachable to said socket plate comprises a hands-free unit.

10. A hands-free support arm for said system of Claim 1, said hands-free support arm comprising

a) a first top bar pivotally connected to a first vertically extending member at its first end and to a second vertically extending member at its second end;

b) a second bottom bar pivotally connected to said first vertically extending member at

its first end and to said second vertically extending member at its second end, said first top bar, said second bottom bar, and said first and second vertically extending members forming a parallelogram linkage;

c) means to attach said first vertically extending member to said system;

5 d) adjustable leveling means associated with said second vertically extending member to position said camera platform support at a desired height;

e) attachment means to secure said hands-free support arm to a user's body;

whereby a full weight of said system and the camera mounted thereon is carried by the user's body leaving her/his hands free.

10 11. The hands-free support arm of Claim 10 wherein said adjustable leveling means comprises an air cylinder connected between said parallelogram linkage and said second vertical member.

12. The hands-free support arm of Claim 11 wherein said second vertically extending member comprises an auxiliary air reservoir tank with an intake orifice to permit an
15 amount of air in said secondary reservoir tank to be adjusted thereby adjusting the level of said camera platform while cushioning said camera platform against jerking movement.

13. The hands-free support arm of Claim 10 wherein said second vertically extending member comprises a support block to which said first top and said second bottom bars
20 are pivotally mounted, said second bottom bar having an extended length which extends past a pivot for said second bottom bar.

14. The hands-free support arm of Claim 13 wherein said adjustable leveling means comprises a compression spring operative between a first reaction surface on said extended length and an adjustable second reaction surface to cantilever a weight of said hands-free arm and its cargo, a position of said second adjustable reaction surface being alterable to provide a desired height of said camera platform.

15. A hands-free support arm for a camera support platform, said hands-free support arm comprising

a) a first top bar pivotally connected to a first vertically extending member at its first end and to a second vertically extending member at its second end;

b) a second bottom bar pivotally connected to said first vertically extending member at its first end and to said second vertically extending member at its second end, said first top bar, said second bottom bar, and said first and second vertically extending members forming a parallelogram linkage;

c) means to attach said first vertically extending member to said camera support platform;

d) adjustable leveling means associated with said second vertically extending member to position said camera support platform at a desired height;

e) attachment means to secure said hands-free support arm to a user's body;

whereby a full weight of said camera support platform and the camera mounted thereon is carried by the user's body leaving her/his hands free.

16. The hands-free support arm of Claim 15 wherein said adjustable leveling means

comprises an air cylinder connected between said parallelogram linkage and said second vertically extending member.

5 17. The hands-free support arm of Claim 16 wherein said second vertically extending member comprises a secondary air reservoir tank with an intake orifice to permit an amount of air in said secondary reservoir tank to be adjusted thereby adjusting the level of said camera support platform while cushioning said camera support platform against jerking movement.

10 18. The hands-free support arm of Claim 15 wherein said second vertically extending member comprises a support block to which said first top and said second bottom bars are pivotally mounted, said second bottom bar having an extended length which extends past a pivot for said second bottom bar.

15 19. The hands-free support arm of Claim 18 wherein said adjustable leveling means comprises a compression spring operative between a first reaction surface on said extended length and an adjustable second reaction surface to cantilever a weight of said hands-free arm and its cargo, a position of said reaction surface being alterable to provide a desired height of said camera support platform.

20 20. A support platform for simultaneously holding a plurality of cameras while recording, said support platform comprising

- a) a first platform to which a first camera is secured;
- b) a support shaft attached to a bottom surface of said platform;
- c) a balance plate mounted on a bottom portion of said support shaft to help

counterbalance a weight of the first camera, said balance plate mounting a second camera;

- d) means attachable to said support shaft by which said platform support and its cargo is suspended;

5 whereby two cameras may simultaneously record in different directions to provide a film editor with differently directed shots taken during a single take.

21. The support platform of Claim 20 wherein said support shaft has

- a) a sphere affixed to an upper portion thereof;
- b) a socket plate member which pivotally captures said sphere in a socket formed
10 therein, said means attachable being connected to a peripheral portion of said socket plate member;

whereby when the support platform with its cargo is transported during video taping using the means attachable to said socket plate member, the camera is maintained in a steady position.